[Mr. I. C. Chacko.]

on account of the transfer of the apicultural branch of the Department of Industries to the Department of Agriculture. The amount required can be provided by diversion from Demand XIV to Demand XIII. In the last budget meeting of the Council, two non-official members pointed out that apiculture is more allied to agriculture than to industries. The Director of Industries also expressed the same opinion. So, the Government have transferred the apicultural section from the Department of Industries to the Department of Agriculture. What is now wanted is only a diversion of funds provided in the budget for the Industrial Department to the budget of the Agricultural Department.

PRESIDENT: May I take it that the House accepts the motion?

The motion was put and carried.

The grant was made.

DEMAND XIV.—INDUSTRIES.

MR. I. C. CHACKO (*Director of Industries*): Sir, I beg to move for a grant not exceeding Rs. 15,000 under Demand XIV for the purchase of a power-driven drill for deep boring. The provision for this is necessitated by various circumstances. Some time ago the Director of Agriculture recommended to the Government that steps should be taken for cultivating the arid lands that lie near the Aramboly Pass. The geologist of the Industrial Department was deputed to make a special survey of the tract with a view to find out the possibilities of working the lands with underground water. The Aramboly tract consists of crystalline rocks and it is not possible to predict from a mere superficial survey whether underground water can be had in abundance. It is possible that we may discover water-bearing fissures and it has to be ascertained by actual boring if such fissures do exist there. The Director of Agriculture has said that, if water can be supplied, those lands can be utilised for growing fruit trees and vegetables and various other crops.

MR. M. R. MADHAVA VARIAR (*Chengannur* cum *Pattanamtitta*): May I know the extent of land available there for cultivation?

MR. I. C. CHACKO (*Director of Industries*): The extent on the northern side of the road from the Aramboly chowkey to the frontier, where irrigation is most wanted is, I understand, from the geologist's report, about one and a half square miles.

MR. A. HOOGEWERF (*Nominated*): Was the survey suggested by the Director of Agriculture?

PRESIDENT: He did not suggest any survey.

MR. I. C. CHACKO (*Director of Industries*): At the last budget session there was a suggestion from the other side of the House that boring experiments should be conducted near Alleppey for ascertaining whether there are petroleum reservoirs at that place. For that purpose also a drill will be very useful. Recently we sent

LIBRARY ARCHIVES Kerala Legislative Assembly

some samples of lignite to the Imperial Institute for investigation. These samples were taken from the lignite exposed at the beach at Varkalai. The Imperial Institute has requested that more representative samples should be obtained and sent for investigation. That can be done more cheaply with the help of a boring machine and for that purpose also a drill is necessary.

MR. M. R. MADHAVA VARIAR (*Chengannur* cum *Pattanamtitta*): Who will be in charge of this drilling machine?

MR. I. C. CHACKO (*Director of Industries*): The Industrial Engineer will be in charge of this machine.

This demand of Rs. 15,000 is for the purchase of the drill and it is expected that we might be able to get it before the end of the year. Further provision has to be made for running charges which will not exceed Rs. 3,000 per year.

MR. S. KRISHNA AIYAR (*Mavelikara* cum *Kartikapalli*): May I know whether any inquiries have been made and quotations secured from any firm?

MR. I. C. CHACKO (*Director of Industries*): Yes. We have obtained some quotations.

MR. S. KRISHNA AIYAR (*Mavelikara* cum *Kartikapalli*): May I know the names of some of those firms?

MR. I. C. CHACKO (*Director of Industries*): We have quotations from the makers themselves. Calyx Drill: maximum depth capacity—800 feet; diameter of bore hole 7" Price. Rs. 12,500, F. O. R. Bombay. (Ingersoll Rand Co., London.) The estimate of Rs. 15,000 is for delivery in Trivandrum and includes other incidental expenditure. We have not decided which kind of drill has to be got down.

MR. M. R. MADHAVA VARIAR (*Chengannur* cum *Pattanamtitta*): Can we get any cheaper drill?

MR. I. C. CHACKO (*Director of Industries*): A cheaper drill will be shorter.

MR. N. RAMAKRISHNA PILLAI (*Vaikam* cum *Ettumanur*): May I know whether there is any urgency in the matter of boring?

MR. I. C. CHACKO (*Director of Industries*): The urgency depends upon the question of getting the work done.

PRESIDENT: We have sent samples of lignite to the Imperial Institute. If we do not want further investigations in the matter, the drill need not be purchased now. May I take it that the House accepts the grant.

MR. M. R. MADHAVA VARIAR (*Chengannur* cum *Pattanamtitta*): I oppose the motion. I do not think there is any urgency for getting down the drill at this time, and the cost is also very prohibitive. Mr. Chacko tells us that he wants this drill to get some lignite to be sent to the Imperial Institute.

LIBRARY ARCHIVES Kerala Legislative Assembly

[Mr. P. K. Narayana Pillai.]

PRESIDENT: That is not the only object.

MR. M. R. MADHAVA VARIAR (*Chengannur* cum *Pattanamtitta*): He also said that this was wanted to know whether there is water in the arid regions near Aramboly. That is only for an experiment and the experiment can very well wait. It is not very urgent. So I oppose the motion.

MR. P. K. NARAYANA PILLAI (*Ambalapuzha*): I too beg to oppose the demand. The special necessity pointed out by Mr. Chacko has reference to two centres—one at Aramboly where, he says, the particular engine is likely to benefit an area of about a square mile and a half. The necessity otherwise referred to was in connection with some boring to be conducted at Alleppey. It was further pointed out that this question was brought forward by this side of the House at the last budget session. But when this was brought forward Mr. Chacko pooh-poohed the idea and maintained that there was no possibility of any petroleum anywhere near the Pallatturutti river at all. I recollect distinctly that the Deputy President was equally keen on the subject. He based his arguments on an article in the *Indian Review* to which very serious objection was taken by Mr. Chacko. Now when he slily comes and says that there is possibility of finding petroleum near the Pallatturutti river by the introduction of this drill, one feels rather inclined to suspect the whole scheme.

Then the other benefit likely to result is with respect to the area of a square mile and a half somewhere near the frontier. And for this purpose of making an experiment, whether this item of Rs. 15,000—

MR. I. C. CHACKO (*Director of Industries*): The area that could be irrigated is 2,500 acres.

MR. P. K. NARAYANA PILLAI (*Ambalapuzha*): You wish to make an amendment to the prior figure given. The area may be extending (*laughter*) while the drill is on its way this side. I am sure the benefit will be increasing. All that I can say is that the whole question rests on a boring speculation. Mr. Chacko himself is not prepared to say whether he has utilised any machinery of this kind.

PRESIDENT: You have not given him one.

MR. P. K. NARAYANA PILLAI (*Ambalapuzha*): Is he in a position to give us an assurance that such and such benefit would accrue, provided he is supplied with a machine of this kind.

PRESIDENT: This is for an experiment and experiment only from beginning to end.

MR. P. K. NARAYANA PILLAI (*Ambalapuzha*): If it is only a question of boring experiment, if no assurance as to benefit can be indicated, then, at least for some of us, it is very difficult to support the demand.

LIBRARY ARCHIVES Kerala Legislative Assembly

MR. S. KRISHNA AIYAR (*Mavelikara* cum *Kartikapalli*): I support Mr. Chacko, but on an entirely different ground. When our Deputy President, at the budget session, referred to the possibility of discovery of petroleum in Travancore, as Mr. P. K. Narayana Pillai pointed out, Mr. Chacko pooh-poohed the idea. Later theories have justified the Deputy President's pronouncement on that occasion. The latest pronouncement upon that subject—and I believe Mr. Chacko is aware of it—is that, where there is lignite formation, at or near the place where it ends, kerosine oil or mineral oil is likely to be discovered. The Varkala formation, as Mr. Chacko says, ends somewhere near Nindakarai. At or near that place, mineral oil is likely to be discovered. No doubt, on the last occasion Mr. Chacko criticised the views of Mr. Krishna Aiyangar and said that the theory that there is oil where troubled waters are still, is merely imaginary. But, now, the latest theory on that subject has justified the Deputy President's view. Therefore, if only Mr. Chacko tries and drills and experiments to find out oil near where the lignite ends, I believe he will be able to discover it. On these grounds, I beg to support the motion.

MR T. K. VELU PILLAI (*Trivandrum* cum *Nedumangad*): Boring appears to me to be a matter of fact and not a proper subject for discourse. But the boring contemplated by the Director of Industries is the scientific boring, for which absolute necessity has been made out. Some of us on this side of the House feel the difficulty to accept statements as to the success of experiments being conducted in Travancore by the Development Departments. In the Popular Assembly, Sir, I have time and again mentioned the short life-history of a traction engine and a saw mill. Large sums of money had been expended upon them and nobody knows how much benefit the Travancore Government or the people got from the purchase of these costly appliances. I trust that the boring instrument now under contemplation will have a better future than its companions. We require a drill of that kind because we have got Development Departments. We have got the Agricultural Department, we have the Industrial Department and the Geological Department. I dare say Mr. Chacko, though now the Director of Industries, has not forgotten his geology. Therefore deep boring is necessary in the case of the Travancore Government, if it wants to get some benefit on the money expended upon the two scholars who were sent to England to study Geology. It is not only the geologist that wants the drill; the engineer wants it; the roadmaker wants it; the man who looks for a perennial supply of water wants it. And, when so many experiments in all these directions are going on in Travancore, how these experiments can go on without a machine of this kind passes one's comprehension. It will be well and good if the drill by acute boring takes us to a bed of gold. It may be good enough if we find ourselves where there is plenty of petroleum. Even if we are not going to be so lucky, in any case, we should not altogether stop our activities in our scientific experiments in Travancore. Hence, I am very glad to support the motion before the House.

LIBRARY ARCHIVES Kerala Legislative Assembly

[Mr. I. C. Chacko.]

MR. A. HOOGEWERF (*Nominated*): I do not want to bore this House with a long speech. (*Laughter.*) I have not made up my mind to support or to vote against the motion. Mr. Chacko's short speech did not explain matters fully. I am not quite convinced of the necessity of this boring experiment. I hope he will give us further details. He spoke about the Aramboly area and said that the conditions there do not exactly admit of experiments being made to ascertain whether there is water. With regard to the petroleum at Alleppey, some investigations have to be made before deciding to purchase an expensive drill. We want more definite statements from Mr. Chacko. Of course, he cannot dogmatically tell us whether we are sure to find mineral oil there or not. His statements are rather vague. Before we enter into experiments of this kind, I think an investigation is necessary. I hope Mr. Chacko will convince us that there is absolute need, as also urgency, in order to show why we should not wait till the next budget meeting.

MR. I. C. CHACKO (*Director of Industries*): I have to correct the impression which I seem to have produced on the House by my first speech. It appears that I said that the drill could be useful only for irrigating the lands at Aramboly. The correspondence before me refers only to the Aramboly area. But I consulted Dr. Kunjan Pillai on the subject subsequently and he said that in Kunnatnad there are vast areas which stand in need of irrigation. There are other taluks also where the existence of water has to be proved. The drill may have to be utilised there also. Mr. P. K. Narayana Pillai wanted me to assure him whether I could find water at Aramboly or in any other place. But, as I have said, it is merely for an experiment. The superficial geological indications do not give any conclusive answer on the subject. I have to find it out by actual boring.

MR. A. HOOGEWERF (*Nominated*): Has any investigation been made on the surface to show if water can be found underneath?

MR. I. C. CHACKO (*Director of Industries*): That there is water underground is quite certain. I am not sure whether there is sufficient water underground at that particular locality.

MR. T. K. VELU PILLAI (*Trivandrum cum Nedumangad*): I wish to know whether, at any time during the last fifteen years he has addressed the Government on the urgency of purchasing a boring drill.

MR. I. C. CHACKO (*Director of Industries*): I do not distinctly remember having addressed the Government on the matter. But I have often felt the necessity for one. Mr. P. K. Narayana Pillai said that I had denied the existence of petroleum at Alleppey. If I remember correctly, I said there are no direct indications of the existence of petroleum which justify a boring operation. Petroleum is only a subsidiary matter. We want the drill to get water for irrigation and for various other purposes too. When we have a drilling machine, we can find out

LIBRARY ARCHIVES Kerala Legislative Assembly

whether there is petroleum at Alleppey. I will have it used for that purpose along with various others. As for the other objections raised by some members on the other side of the House, Mr. Velu Pillai has very ably defended--or advocated—the cause of the boring machine. So I need not enter upon that subject. With these few remarks, I move for the grant.

The demand was put to the vote and carried.

The Council adjourned for lunch at 2-18 P. M. and met again at 3-5 P. M.

DEMAND XX—PUBLIC WORKS.

MR. K. V. NATESA AIYAR (*Chief Engineer*) : Sir, I rise to move for a supplementary grant not exceeding Rs. 63,770 (Rs. 58,370 on account of additional allotment *mostly* for means of communications in the northern taluks of the State, and Rs. 5,400 for an additional temporary staff, etc., in connection with the restoration of irrigation works).

In moving the above, I shall place before the members of the Council a few facts. There was considerable discontent at the last budget session of the Legislative Council, that the allotments for communications in the northern taluks were inadequate and that the promises held out in the Dewan's replies at the last S. M. P. Assembly session had not been kept.

It was stated by me in my speech at the general discussion of the budget on 3rd August last that if some more schemes and estimates were got ready during the course of the year, they would be taken up by applying for supplemental grants. The year 1098 has also closed with a decent surplus. Accordingly, lists of urgent works which could be taken up this year itself were prepared and some incomplete works of 1098 omitted to be provided for in the budget were also included therein. The additional grant now applied for amounts to Rs. 58,370, of which a sum of Rs. 8,360 is for works arranged for in 1098 and the balance of Rs. 50,010 is all for new works proposed to be taken up. This additional grant includes a provision, of Rs. 1,600 for only one building work; "certain improvements to the District Hospital at Vaikam, extending the operation room." This has been pressed on the Government as urgent and the estimate has been got ready.

Out of the sum of Rs. 56,770 which is for communications, the Kodayar Project Division will get Rs. 5,960, the Quilon P. W. Division Rs. 10,500, the Kottayam P. W. Division Rs. 29,660, and the Alwaye P. W. Division Rs. 10,650.

MR. M. K. KHADIR PILLAI (*Nominated*) : I want to know how much has been set apart for Alwaye.

PRESIDENT : Rs. 10,000 and odd.

MR. K. V. NATESA AIYAR (*Chief Engineer*) : For want of time, the list of the works has not been placed on the table. So I shall read them from the list I have with me.

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